CLAIMS

What is claimed is:

1. A method for increasing the capacity of insulin providing cells in an animal comprising administering to said animal a therapeutically effective dose of at least one DP IV enzyme activity effector.

2. The method of claim 1 wherein said increasing the capacity of insulin producing cells comprises causing endogenous insulin producing cells to become more effective insulin producers.

3. The method of claim 1 wherein said increasing the capacity of insulin producing cells comprises causing cells present in the pancreas to differentiate into insulin producing cells.

4. The method of claim 1 wherein said DP IV effector is selected from the group consisting of N-(N'-substituted glycyl)–2-cyanopyrrolidines, N-aminoacyl thiazolidines, N-aminoacyl pyrrolidines: such as L-*threo*-isoleucyl thiazolidine (P32/98), L-*allo*-isoleucyl thiazolidine, L-*threo*-isoleucyl pyrrolidine, and L-*allo*-isoleucyl pyrrolidine and pharmaceutical salts thereof.

5. The method of claim 1 wherein said effector comprises a substrate capable of binding with said DP IV and which competes with naturally occurring substrates for DP IV.

6. The method of claim 1 wherein said administration comprises oral administration.

7. The method of claim 1 wherein said administration comprises *iv* or *im* injection.

8. The method of claim 1 wherein said administration comprises chronic oral administration.

9. The method of claim 1 wherein said administration comprises chronic *iv* or *im* injection.

10. The method of claim 1 further comprising the administration of glucose or the intake of food takes place before, during or after the administration of said DP IV activity effector.

11. The method of claim 8 wherein said administration of said DP IV activity effector occurs before said administration of glucose, or intake of food.